

In the claims:

Please amend claims as follows:

1. (previously presented) A spectacle lens comprising:
a front surface;
a back surface;
a peripheral edge; and
a vision correcting area having a refractive error correction, wherein at least a portion of the refractive error correction is based on a lens prescription determined by a wave front analysis of a wearer's eye and wherein the vision correcting area corrects non-conventional refractive error to provide at least a part of the wearer's vision correction and wherein the peripheral edge is capable of being modified to fit within an eyeglass frame.
2. (previously presented) The lens of claim 1 wherein the vision correcting area corrects for conventional refractive error.
3. (previously presented) The lens of claim 1 wherein the vision correcting area corrects for an aberration of the lens.
4. (previously presented) The lens of claim 1 wherein the lens comprises a material having a variable index of refraction.
5. (previously presented) The lens of claim 1 wherein the lens comprises a material having a modifiable index of refraction.

6. (previously presented) The lens of claim 1 wherein the back surface is concave.
7. (previously presented) The lens of claim 1 wherein the lens is capable of correcting non-conventional refractive error caused by one of an aberration, irregular astigmatism, and ocular layer irregularities.
8. (previously presented) The lens of claim 1 wherein the lens provides a prismatic power.
9. (previously presented) The lens of claim 1 wherein the lens has a chromic characteristic.
10. (previously presented) The lens of claim 1 wherein correction of unconventional refractive error is provided by localized changes in a refractive power of the lens.
11. (previously presented) The lens of claim 1 wherein the lens corrects the wearer's vision to better than 20/20.
12. (previously presented) The lens of claim 1 wherein the lens corrects the wearer's vision to better than 20/10.
13. - 15. (cancelled)
16. (previously presented) A spectacle lens comprising:

a front surface;
a back surface;
a peripheral edge; and

a vision correcting area having a refractive error correction, wherein the vision correcting area uses adaptive optics to correct for non-conventional refractive error to provide a wearer better than 20/20 vision and wherein the peripheral edge is capable of being modified to fit within an eyeglass frame.

17. (currently amended) An optical system ~~An apparatus~~ for determining the refractive error of a patient's eye, comprising:

an optic within the line of sight of the patient's eye, ~~wherein the optic is capable of refracting light entering the patient's eye;~~ and

a wavefront measurement device positioned to measure the refraction properties of the patient's eye;

wherein ~~an optical power of the optic is adjusted~~ to the patient's liking based on input received from the patient ~~while the patient looks through the optic.~~

18. (currently amended) The optical system ~~apparatus~~ of claim 17 wherein the refractive error of the patient's eye is at least one of conventional and non-conventional refractive error.

19. (currently amended) The optical system ~~apparatus~~ of claim 17 wherein the optic is a lens.

20. (currently amended) The optical system ~~apparatus~~ of claim 19 wherein the lens ~~optic~~ is an electro-active lens.
21. (currently amended) The optical system ~~apparatus~~ of claim 17 wherein the refraction properties of the optic is adjusted in a closed-loop fashion based upon the measurements made by the wavefront measurement device.
22. (currently amended) The optical system ~~apparatus~~ of claim 17 wherein the refraction properties of the optic comprises at least one of conventional or non-conventional refraction properties.
23. (currently amended) The optical system ~~apparatus~~ of claim 17 wherein the optic is modified in its power prescription as a final optical prescription for the patient is determined.
24. (currently amended) The optical system ~~apparatus~~ of claim 17 wherein the optic is modified in its power prescription as the patient determines his or her visual clarity.
25. (currently amended) The optical system ~~apparatus~~ of claim 17 wherein the refractive error is one of myopia, hyperopia, astigmatism, presbyopia, irregular astigmatism or an aberration.
26. (currently amended) The optical system ~~apparatus~~ of claim 17 ~~25~~ wherein the source of the aberration is within the human eye.

27. (currently amended) The optical system apparatus of claim 17 wherein the measurements of the refraction properties of the patient's eye are determined subjectively, objectively or both.

28. (currently amended) An optical measuring system for quantifying the refractive error of a human eye comprising:

a means for altering the path of light ~~refractor or phoropter~~; and

an auto-refractor or wave-front analyzer capable of determining an aberration of a patient's eye ~~associated with the refractor or phoropter~~,

wherein the refractive error is at least one of conventional refractive error or non-conventional refractive error, and wherein the optical measuring system quantifies the refractive error of the a patient's eye along the line of sight of the patient's eye wherein the patient provides communication that assists in determining the refractive error.

29. (previously presented) The optical measuring system of claim 28 wherein the optical measuring system quantifies the refractive error automatically.

30. (previously presented) The optical measuring system of claim 28 wherein the optical measuring system quantifies the refractive error with the aid of an eye-care professional.

31. (previously presented) The optical measuring system of claim 28 wherein the optical measuring system measures the refractive error with the aid of the patient.

32. (currently amended) The optical measuring system of claim 28 wherein the adaptive optic ~~a lens is inserted in front of the patient's eye and wherein the lens is~~ modified to correct for the patient's refractive error as the patient's refractive error is being quantified.

33. (currently amended) The optical measuring system of claim ~~28~~ 32 wherein the adaptive optic ~~by the lens is modified in its prescription~~ as the patient decides on his or her visual clarity in response to the modification of the adaptive optic lens.

34. (previously presented) The optical measuring system of claim 28 wherein the conventional refractive error is one of myopia, astigmatism, hyperopia, presbyopia, and wherein the non-conventional refractive error is one of irregular astigmatism and an aberration.

35. (previously presented) The optical measuring system of claim 34 wherein the aberration is within the human eye.

36. (previously presented) The optical measuring system of claim 28 wherein the refractive error of the patient is determined by at least one of subjective and objective measurements of the patient's eye.

37. - 58. (cancelled)

59. (new) The lens of claim 1 wherein the non-conventional refractive error correction is different in different regions of the vision correcting area.
60. (new) The lens of claim 16 wherein the non-conventional refractive error correction of the adaptive optics corrects for an aberration.
61. (new) The lens of claim 60 wherein the non-conventional refractive error correction of the adaptive optics changes to correct for an aberration based on the distance viewed by the wearer.
62. (new) The system of claim 17 wherein the optic is an adaptive optic.
63. (new) The system of claim 62 wherein the adaptive optic is one of transmissive or reflective.
64. (new) The system of claim 17 wherein the source of the aberration is the optic.
65. (new) The system of claim 17 wherein a final refractive prescription is achieved with assistance from the patient for refining at least one of the patient's conventional refractive error and non-conventional refractive error.
66. (new) The system of claim 17 wherein the refractive error measurement is a binocular measurement.

67. (new) The optical measuring system of claim 28 wherein the means to alter the path of light is an adaptive optic.

68. (new) The optical measuring system of claim 67 wherein the adaptive optic is a lens.

69. (new) The optical measuring system of claim 67 wherein the lens is transmissive or reflective.

70. (new) The optical measuring system of claim 68 wherein the lens is an electro-active lens.

71. (new) A spectacle lens comprising:

a front surface;

a back surface;

a peripheral edge; and

a vision correcting area that provides at least two different regions of refractive error correction, wherein the refractive error correction of a first region utilizes a prescription determined in part from a wavefront analysis of a wearer's eye and corrects for both non-conventional refractive error and conventional refractive error to provide for the highest level of vision correction for the wearer and wherein the refractive error correction of a second region corrects for refractive error that provides a lesser level of vision correction for the wearer than the refractive error correction of the first region.

72. (new) The lens of claim 71 wherein the vision correcting area corrects for one of distance, intermediate, or near vision of the wearer.

73. (new) The lens of claim 71 wherein the vision correcting area corrects for an aberration of the lens.

74. (new) The lens of claim 71 wherein the lens comprises a material having a variable index of refraction.

75. (new) The lens of claim 71 wherein the lens is an electro-active lens.

76. (new) The lens of claim 71 wherein the lens comprises a material having a modifiable index of refraction.

77. (new) The lens of claim 71 wherein the back surface is concave.

78. (new) The lens of claim 71 wherein the lens is capable of correcting non-conventional refractive error caused by one of an aberration, irregular astigmatism, and ocular layer irregularities.

79. (new) The lens of claim 71 wherein the lens provides a prismatic power.

80. (new) The lens of claim 71 wherein the lens has a chromic characteristic.
81. (new) The lens of claim 71 wherein correction of non-conventional refractive error is provided by localized changes in a refractive power of the lens.
82. (new) The lens of claim 71 wherein the lens corrects the wearer's vision to better than 20/20.
83. (new) The lens of claim 71 wherein the lens corrects the wearer's vision to better than 20/10.
84. (new) The lens of claim 71 wherein the lens is capable of being mounted into a frame.
85. (new) The lens of claim 71 wherein the vision correcting area provides at least two separate regions for the correction of non-conventional refractive error in different areas of the lens.
86. (new) An apparatus for determining the refractive error of a patient's eye, comprising:
an adaptive optic capable of altering light entering the patient's eye; and
a wavefront measurement device positioned to measure refraction properties of the patient's eye;
wherein the adaptive optic is adjusted to alter the light entering the patient's eye, wherein the patient assists in refining the patient's final vision prescription.

87. (new) The apparatus of claim 86 wherein the adaptive optic is transmissive or reflective.

88. (new) The apparatus of claim 86 wherein the measured refraction properties are a binocular measurement.

89. (new) A lens comprising:

a front surface;

a back surface;

a peripheral edge; and

a vision correcting area providing at least two regions of different vision correction for a user, wherein at least a first vision correction region provides a refractive error correction including non-conventional refractive error correction based on a lens prescription determined in part by a wavefront analysis of the user's eye and provides the highest level of vision correction for the user and wherein at least a second vision correction region provides a lesser level of vision correction to the user than the first vision correction region.

90. (new) The lens of claim 89 wherein the non-conventional refractive error correction is different in different non-conventional refractive error correction regions.

91. (new) A lens comprising:

a front surface;

a back surface;

a peripheral edge; and

a vision correcting area that corrects for an aberration of a wearer's eye based upon a wavefront analysis of the wearer's eye and wherein a region of the lens where the wearer's line of sight transverses the lens is capable of being dynamically altered in its vision correction.

92. (new) The lens of claim 91 wherein the lens is electro-active.

93. (new) The lens of claim 91 wherein the wearer's line of sight is tracked by an eye tracking system.

94. (new) The lens of claim 91 wherein the region of the lens where the wearer's line of sight transverses the lens is static.

95. (new) The lens of claim 91 wherein the vision correction is altered based upon the distance to an object at which the wearer is looking.